

ABSTRACT

A vibration damper for controlling the torsional and bending vibrations in a rotating shaft is provided. The vibration damper includes a hub, an inertia element, and an elastic element that possess a first shear modulus in a first direction and a second shear modulus in a second direction. The hub is adapted to be coupled to the shaft for rotational movement. The inertia element is concentric with the hub and has a mass. The elastic element is adapted to non-rigidly couple the hub and the inertia element. The elastic element may be a non-isotropic composite material having a plurality of fibers dispersed therein.

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